

In the Claims:

Please cancel claims 1-33 without prejudice. New claims 34-53 remain in this application.

Claims 1-33 (Canceled)

Please add the following new claims:

34. (New Claim) A microelectromechanical scanner, comprising:
a substrate;

an oscillatory body carried by the substrate and coupled to the substrate for periodic movement along a movement path by a set of primary arms;

an actuator coupled to the oscillatory body and configured to drive the oscillatory body along the movement path; and

at least one mass formed on the oscillatory body in an asymmetric distribution about a centerline of the oscillatory body, the at least one mass being formed to create a periodic movement component orthogonal to the periodic movement path defined by the set of primary arms.

35. (New Claim) The microelectromechanical scanner of claim 34, wherein the at least one mass on the oscillatory body is formed by first applying a first mass and then selectively removing a portion of the first mass to form a smaller second mass.

36. (New Claim) The microelectromechanical scanner of claim 35, wherein a portion of the first mass is removed by ablation.

37. (New Claim) The microelectromechanical scanner of claim 35, wherein a portion of the first mass is removed by etching.

38. (New Claim). The microelectromechanical scanner of claim 34, wherein the at least one mass on the oscillatory body is selectively applied.

39. (New Claim) The microelectromechanical scanner of claim 34, wherein the periodic movement component has twice the resonant frequency of the periodic movement along the movement path defined by the primary arms.

40. (New Claim) A microelectromechanical scanner, comprising:
a substrate;

an oscillatory body carried by the substrate and coupled to the substrate for periodic movement along a primary periodic movement path by a set of primary arms;

an actuator coupled to the oscillatory body and configured to drive the oscillatory body along the primary periodic movement path; and

an array of mass locations on the oscillatory body, the mass locations comprising a pre-determined set of locations for placement of one or more masses for inducement of a secondary periodic movement orthogonal to the primary periodic movement path.

41. (New Claim) The microelectromechanical scanner of claim 40, wherein the array of mass locations are photolithographically defined.

42. (New Claim) The microelectromechanical scanner of claim 41, wherein the photolithographic definition comprises indicia for indicating mass application.

43. (New Claim) The microelectromechanical scanner of claim 42, wherein mass is selectively added using feedback from the indicia.

44. (New Claim) The microelectromechanical scanner of claim 40, wherein photolithographic definition comprises the addition of mass at the array of locations.

45. (New Claim) The microelectromechanical scanner of claim 44, wherein mass is selectively removed from the array of locations.

46. (New Claim) The microelectromechanical scanner of claim 45, wherein mass is selectively removed by etching at least one of the array of locations.

47. (New Claim) The microelectromechanical scanner of claim 45, wherein mass is selectively removed by ablating mass from at least one of the array of locations.

48. (New Claim) The microelectromechanical scanner of claim 40, wherein the mass locations are selectively filled.

49. (New Claim) The microelectromechanical scanner of claim 48, wherein the selectively filled mass locations are later selectively removed.

50. (New Claim) A beam scanning apparatus, comprising:
a beam source; and
a beam director aligned to direct a periodically scanned beam across a two dimensional field-of-view;
the beam director comprising a substrate;
an oscillatory body having an asymmetric mass distribution carried by the substrate and coupled to the substrate for movement about a fast scan axis and an orthogonal slow scan axis; and
an actuator coupled to the oscillatory body and configured to drive the oscillatory body along the fast scan movement path periodically and slow scan movement path substantially linearly;
the asymmetric mass distribution of the oscillatory body being formed to create a periodic movement component orthogonal to the periodic fast scan movement path.

51. (New Claim) The beam scanning apparatus of claim 50, wherein:
the asymmetric mass distribution of the oscillatory body is selected to create a periodic movement component having substantially twice the frequency of the orthogonal fast scan movement.